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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/630,915

07/31/2003

Gunter Kuechler

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EXAMINER

WONG, EDNA

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

04/20/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/630,915	<b>Applicant(s)</b> KUECHLER, GUNTER	
	<b>Examiner</b> EDNA WONG	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,12,14,16,17 and 31-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,12,14,16,17 and 31-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

This is in response to the Amendment dated February 26, 2009. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

### ***Response to Arguments***

#### **Claim Rejections - 35 USC § 102/103**

Claims **1, 17 and 31** have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Gaddy** (US Patent No. 5,006,179).

The rejection of claims 1, 17 and 31 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gaddy is as applied in the Office Action dated November 26, 2008 and incorporated herein. The rejection has been maintained for the following reasons:

Applicant states that Gaddy affirmatively teaches away from forming the connecting parts and the stress relief part as integral portions of a metal strip, in order to achieve the advantages of the three-part construction described above.

In response, the Examiner finds that a piece of the three-part construction disclosed by Gaddy, i.e., the construction of the second connecting part **50**, reads on the construction of the solar cell interconnecting element as presently claimed.

The Applicant has a different reason for, or advantage resulting from doing what the prior art relied upon has suggested, it is noted that it is well settled that this is not

demonstrative of nonobviousness. *In re Kronig* 190 USPQ 425, 428 (CCPA 1976); *In re Linter* 173 USPQ 560 (CCPA 1972); the prior art motivation or advantage may be different than that of Applicants while still supporting a conclusion of obviousness. *In re Wiseman* 201 USPQ 658 (CCPA 1979); *Ex parte Obiaya* 227 USPQ 58 (Bd. of App. 1985) and MPEP § 2144.

Applicant states that it is noteworthy in this regard that the part of the interconnect device in Gaddy which corresponds most closely to the “compensation section” as defined in Claim 1 is the “stress relief part 32”. As noted at Column 3, line 68 through Column 4, line 9, however, the stress relief part is provided in the form of an “elongated” member which is “disposed substantially parallel to adjacent edges of the first and second solar cells” between which it is situated. (See Figure 6, element 32. See also, Column 3, lines 57-62.) The stress relief part 32 itself is not connected to either of the adjacent solar cells, nor is it integrally formed with the connection parts 40, 50, which provides such a connection. Moreover, it does not comprise “a single central opening” in a metallic strip, which is defined by a surrounding marginal area, with the compensation section itself and the central opening being round, oval or polygonal, as recited in Claim 1.

In response, the Examiner finds that a piece of the three-part construction disclosed by Gaddy, i.e., the construction of the second connecting part **50**, reads on the construction of the solar cell interconnecting element as presently claimed.

The naming of the element does not structurally distinguish the element from the prior art.

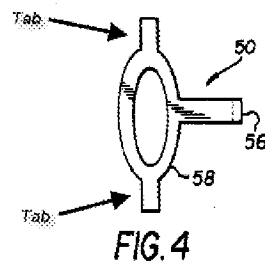
Although Gaddy teaches that the proximal end portion **56** of the second connecting part **50** is joined to the second end portion **38** of the stress relief part **32**, and not to a solar cell, the solar cells are not structural to the construction of the solar cell interconnecting element.

Applicant states that the structure relied on in the Office Action, being that of the second connecting part 50 as illustrated in Figures 3 and 4 of the Gaddy patent, does not constitute "a solar cell interconnecting element for connecting between adjacent solar cells". In fact, insofar as the specification indicates, the second connecting part 50 does no more than to connect one of the solar cells with the "stress relief part" 32. It does not interconnect adjacent solar cells. Moreover, it does not include first and second connection areas which comprise tabs "that are configured and disposed so as to be connectable to respective ones of said adjacent solar cells, forming a conductive connection between said solar cells". Finally, Applicants note that the centrally situated oval portion of the second connecting part 50 in Gaddy does not constitute a "compensation section" which is configured to compensate for mechanical or other tensions due to movement between said adjacent solar cells as further recited in Claim 1. Although the disclosure in Gaddy appears to contain no explanation for the particular shape or structure of the second connecting part 50, clearly it is not connected between

adjacent solar cells, and is not configured to compensate for mechanical or other tensions due to movement between the adjacent solar cells. Rather, the latter function is performed by the stress relief part 32.

In response, article claims must be structurally distinguishable from the prior art (MPEP § 2114). Using the solar cell interconnecting element for connecting between adjacent solar cells does not structurally distinguish the construction of the solar cell interconnecting element from the prior art.

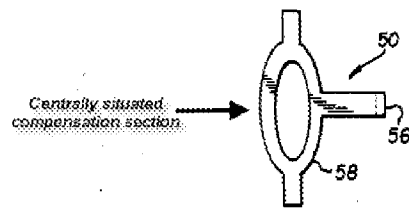
The first and second connection areas, as presently claimed, comprises tabs.



Gaddy shows tabs:

(Fig. 4). The tabs disclosed by Gaddy are configured and disposed so as to be connectable. Although Gaddy does not disclose that the tabs are connectable to respective ones of adjacent solar cells, forming a conductive connection between said solar cells, the solar cells are not structural to the construction of the solar cell interconnecting element.

Gaddy teaches a centrally situated compensation section:



(Fig. 4). The centrally situated compensation section

disclosed by Gaddy is configured. Although Gaddy does not disclose that the centrally situated oval portion of the second connecting part **50** compensates for mechanical or other tensions due to movement between adjacent solar cell, this would have been an inherent property of the centrally situated oval portion of the second connecting part **50** because similar construction of elements can reasonably be expected to yield products which inherently have the same properties.

#### Claim Rejections - 35 USC § 103

I. Claims **12, 14 and 16** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Gaddy** (US Patent No. 5,006,179) as applied to claims 1, 17 and 31 above, and further in view of **Pollard** (US Patent No. 6,034,322).

The rejection of claims 12, 14 and 16 under 35 U.S.C. 103(a) as being unpatentable over Gaddy as applied to claims 1, 17 and 31 above, and further in view of Pollard is as applied in the Office Action dated November 26, 2008 and incorporated herein. The rejection has been maintained for the reasons as discussed above.

Applicant's remarks have been fully considered but they are not deemed to be persuasive.

II. Claim **32** has been rejected under 35 U.S.C. 103(a) as being unpatentable over **Gaddy** (US Patent No. 5,006,179) as applied to claims 1, 17 and 31 above.

The rejection of claim 32 under 35 U.S.C. 103(a) as being unpatentable over Gaddy as applied to claims 1, 17 and 31 above is as applied in the Office Action dated November 26, 2008 and incorporated herein. The rejection has been maintained for the reasons as discussed above.

III. Claims **1, 12, 14, 16-17 and 31-32** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Webb et al.** (US Patent No. 3,422,213) in combination with **Pollard** (US Patent No. 6,034,322) and **Gaddy** (US Patent No. 5,006,179).

The rejection of claims 1, 12, 14, 16-17 and 31-32 under 35 U.S.C. 103(a) as being unpatentable over Webb et al. in combination with Pollard and Gaddy is as applied in the Office Action dated November 26, 2008 and incorporated herein. The rejection has been maintained for the following reasons:

Applicant states that the “stress relieved area” as seen for example, in Figure 2, has a shape which is clearly not round, oval or polygonal. Rather, the open area in the central portion of the stress relieved area has a shape which could best be described as having curved sides and pointed ends. Since this particular shape results from the manner in which the connector strip in Webb et al is divided into a plurality of “strand-like portions”, it can be seen that, the structure defined in Webb et al could not be modified to achieve a round, oval or polygonal central opening without extensive and



fundamental modification of both its structure and its manner of fabrication. Applicants respectfully submit that nothing contained in either Pollard or Gaddy teaches or suggests a manner in which such a modification might be achieved.

In response, it appears that the plurality of integral strand-like portions does not appear until after the connector strip is chemically milled. Thus, before the chemical milling, one having ordinary skill in the art would have envisaged and achieved an open area in the central portion of the stress relieved area of a round or oval shape in view of Pollard and Gaddy.

Furthermore, the plurality of integral strand-like portions disclosed by Gaddy provides greater flexibility to the stress relieved area (col. 2, lines 26-35). Thus, flexibility is already achieved without chemical milling the connector strip, and with as expected or envisaged with the oval shapes taught by the prior art.

### ***Response to Amendment***

#### ***Claim Objections***

Claims **31 and 32** are objected to because of the following informalities:

#### **Claim 31**

line 1, the words "The solar" should be amended to the word -- Solar --. See claims 12, 14 and 16-17, line 1, respectively of each claim.

Claim 32

line 1, the words "The solar" should be amended to the word -- Solar --. See claims 12, 14 and 16-17, line 1, respectively of each claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

I. Claim **33** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 33

lines 11-12, recite "said adjacent ***fuel cells***".

Applicant's specification does not disclose fuel cells.

II. Claims **17 and 33** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17

line 2, "the solar cell connector" lacks antecedent basis.

Claim 33

lines 11-12, "said adjacent fuel cells" lack antecedent basis.

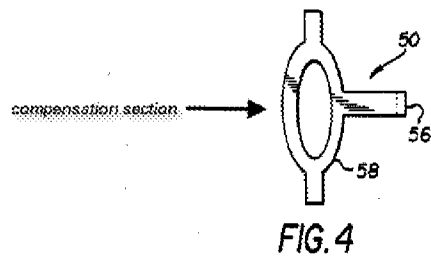
lines 17-18, "said first and second connection areas" lack antecedent basis.

***Claim Rejections - 35 USC § 102/103***

Claim **33** is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Gaddy** (US Patent No. 5,006,179).

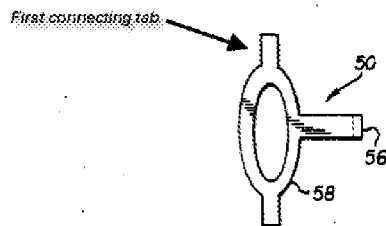
Gaddy teaches an interconnecting element for connecting adjacent solar cells, said interconnecting element comprising:

a compensation section that is configured to be connectable (=



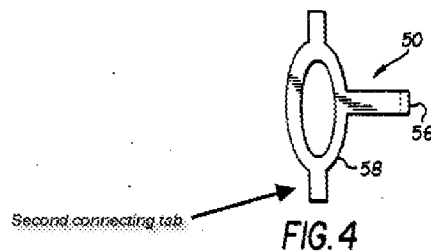
) [Fig. 4] between said adjacent solar cells, and to absorb mechanical tension attributable to relative movement between said adjacent solar cells;

a first connecting tab which extends laterally from a first side of said compensation section, and which is configured and disposed in such a manner (=



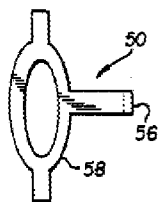
) [Fig. 4] as to be connectable to a first one of said adjacent solar cells;

a second connecting tab which extends laterally from a second side of said compensation section, opposite said first side, and which is configured and disposed in



such a manner (= ) [Fig. 4] as to be connectable to a second one of said adjacent fuel cells;

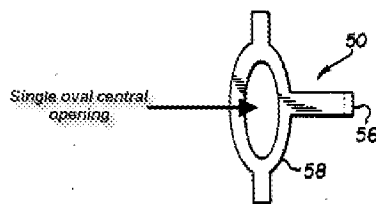
wherein, said first and second connecting tabs and said compensation section are formed integrally, as a unitary continuous segment of a metal strip



(= ) [Fig. 4];

the compensation section comprises a single central opening in said metal strip; said central opening is intermediate said first and second connection areas, and is

delimited by a surrounding marginal area of said metal strip; and the compensation section and the central opening are one of round, oval, and polygonal



(= ) [Fig. 4].

### ***Claim Rejections - 35 USC § 103***

Claim **33** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Webb et al.** (US Patent No. 3,422,213) in combination with **Pollard** (US Patent No. 6,034,322) and **Gaddy** (US Patent No. 5,006,179).

Webb teaches an interconnecting element for connecting adjacent solar cells (col. 1, lines 30-33), said interconnecting element comprising:

a compensation section **44** (= a stress relieved area) that is configured to be connectable between said adjacent solar cells, and to absorb mechanical tension attributable to relative movement between said adjacent solar cells (col. 3, lines 47-70; and Figs. 1 and 2);

a first connecting tab **38** (= a first section) which extends laterally from a first side of said compensation section, and which is configured and disposed in such a manner as to be connectable to a first one of said adjacent solar cells (col. 3, lines 47-70; and Figs. 1 and 2);

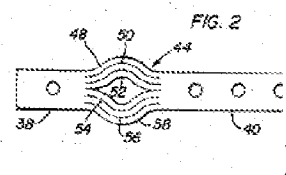
a second connecting tab **40** (= a second section) which extends laterally from a second side of said compensation section, opposite said first side, and which is configured and disposed in such a manner as to be connectable to a second one of said adjacent fuel cells (col. 3, lines 47-70; and Figs. 1 and 2);

wherein, said first and second connecting tabs and said compensation section are formed integrally, as a unitary continuous segment of a metal strip;

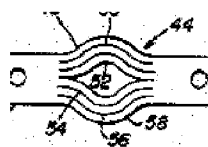
the compensation section comprises a single central opening in said metal strip; and

said central opening is intermediate said first and second connection areas, and

is delimited by a surrounding marginal area of said metal strip (= [Fig. 2].

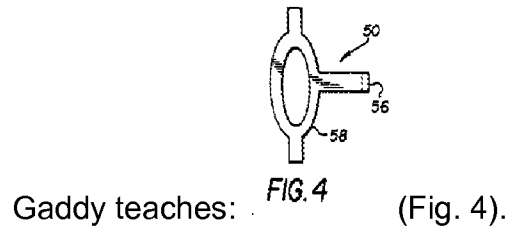
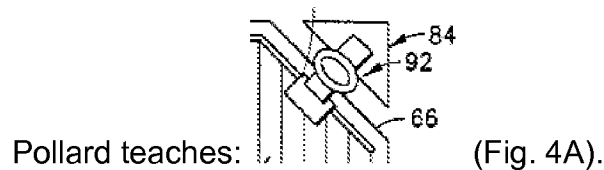


The element of Webb differs from the instant invention because Webb does not disclose wherein the compensation section and the central opening are one of round, oval, and polygonal, as recited in claim 33.



Webb teaches: (Fig. 2).

Like Webb, **Pollard** (col. 5, lines 42-58; and Figs. 6 and 7) and **Gaddy** (col. 1, lines 8-11) teach solar cell interconnects.



It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the compensation section and the central opening described by Webb with wherein the compensation section and the central opening are one of round, oval, and polygonal because structural relationships may provide the requisite motivation or suggestion to modify known structures to obtain new shapes.

Furthermore, it has been held that changes in shape were a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular shape claimed was significant (MPEP § 2144.04(IV)(B)).

Furthermore, the plurality of integral strand-like portions disclosed by Gaddy provides greater flexibility to the stress relieved area (col. 2, lines 26-35). Thus, flexibility is already achieved without chemical milling the connector strip, and with as expected or envisaged with the oval shapes taught by the prior art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDNA WONG whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for



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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edna Wong/  
Primary Examiner  
Art Unit 1795

EW  
April 19, 2009